Preliminary Technical Status – Newport & Xcel Combustion Facilities

Ramsey/Washington County Resource Recovery Project Board

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Presentation Content

- Purpose
- Technical Status of:
  - Newport Resource Recovery Facility
  - Xcel Combustion Facility in Red Wing and Mankato (Wilmarth)

Preliminary Technical Reviews

- Preliminary review of the condition/status
  - General status and physical condition
  - Regulatory status
  - Performance
  - Future plans
  - Potential future risks

Purpose/Role of Analysis

- Report provides value for:
  - Understanding facilities' potential roles in future processing
  - Information for the Newport Facility option to purchase

Newport Resource Recovery Facility

- Key Features
  - 129,000 square foot building on 14 acres
  - Permitted to process up to 500,000 tpy
  - Receives ~ 400,000 tpy +/- of MSW
  - Produces ~ 325,000 tpy +/- of RDF

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Loader in Receiving Area

Grapple Cranes Feed Conveyor

Hammer Mill Shreds MSW

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Conveyors Carry Materials

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Belt Magnet Pulls Ferrous

Disc Screens for Size Separation

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Air Classifier Sorts Lights & Heavies

Eddy Current for Aluminum

Transfer Trailers Haul Materials

Newport Facility General Status

- Equipment evolved/improved over time
- Maintenance is an “on-going process”
- Maintenance both scheduled and as needed
- Daily maintenance shift
- Spare parts maintained

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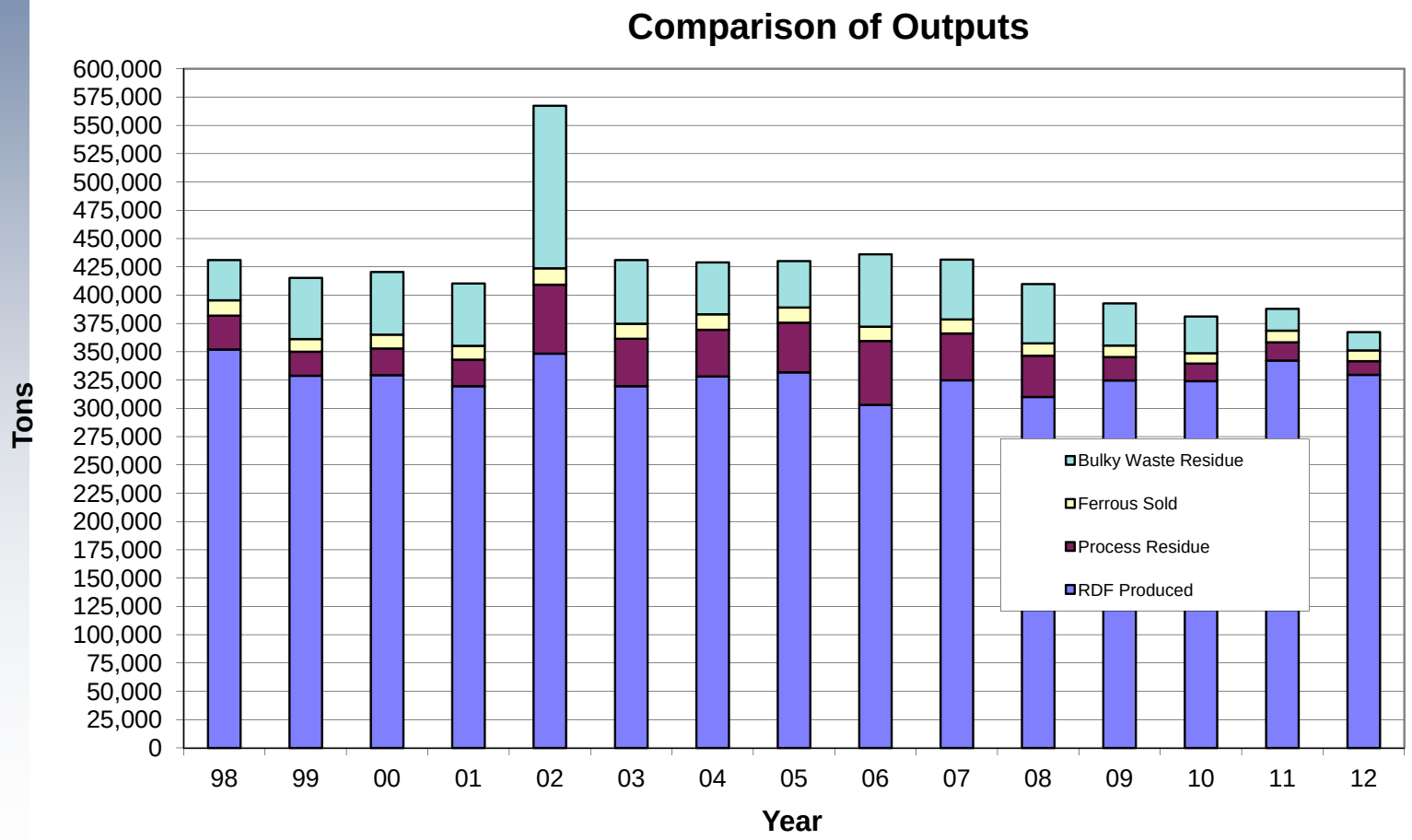
Permits & Regulatory Requirements

- All permits are current
- Reports submitted as required
- Annual fees paid as required
- No enforcement activities or penalties noted

Performance Over Time



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Plant Failures/Risks

- Major failures could be:
  - Major extended power loss
  - Hammer mill explosion causing major damage
  - Building collapse from storm
  - Flood
- NONE of these have happened in 26 years

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Minor Plant Failures

- Lost or reduced processing for a day or less
  - Risk is mitigated by
    - Two processing lines
    - Equipment modifications over time
    - On-going, daily maintenance
    - Keeping spare parts

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Site Easement/License Agreement

- Easement Agreement for site access is transferrable
- License Agreement for a small portion of parking lot is not transferrable
- Limit future construction

RRT Conclusions

- Operated successfully for 26 years
- Equipment improved over time
- Adequate maintenance as needed
- Permits in good standing

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RRT Conclusions

- Performance producing RDF has been maintained
- Extensive operating experience of existing staff is significant success factor
- Easement and License Agreements may limit future uses

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Xcel Combustion Facilities

- Red Wing & Wilmarth constructed 1947/48, converted to RDF in 1987/88
- Each has 2 boiler/turbine-generator power generation units

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Xcel Combustion Facilities

- Part of Midwest Independent System Operator (MISO) group
- Considered “must run” facilities
- Must run at optimal capacity at all times
- No need to compete to sell power

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Common Characteristics

- Burning capacity ~200,000 tpy
- Have storage barns for RDF surges
- Routine scheduled down-time for maintenance and some unscheduled down-time

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RDF in Storage Barn

Common Characteristics

- Air pollution control upgrades in 1999/2000
- Over-sized baghouses result in very low emissions

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Baghouse and Exhaust Air Handling Equipment

Future Xcel Plans

- *"Life Extension Study Red Wing and Wilmarth Stations"* evaluated operation to either 2017 or 2027
- "Take or Pay" RDF requirements
- Developed Capital Improvement Plans with $67 million
- No reason plants can't last until 2027

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Regulatory Status

- Both facilities use river water for cooling water
- Affected by Section 316 (b) of Clean Water Act
- Upgrades to resolve included in CIP
- No reported air permit issues since 2004

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Conclusions

- Xcel's own study cited no apparent reason plants cannot continue operation to 2017 or 2027

- CIP projects are being "front-loaded" to maximize their value to Xcel

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